Check List the journal of biodiversity data

NOTES ON GEOGRAPHIC DISTRIBUTION

Check List 11(5): 1744, 19 September 2015 doi: http://dx.doi.org/10.15560/11.5.1744
ISSN 1809-127X © 2015 Check List and Authors

Xenohyla eugenioi Caramaschi, 1998 (Amphibia: Anura: Hylidae): geographic distribution and new record from the state of Sergipe, northeastern Brazil

Rony Peterson Santos Almeida[1*], **Hugo Andrade**[1], **Ulisses Caramaschi**[2] and **Eduardo José dos Reis Dias**[1]

1 Universidade Federal de Sergipe, Departamento de Biociências, Laboratório de Biologia e Ecologia de Vertebrados, Avenida Vereador Olímpio Grande s/n, Centro, CEP 49500-000, Itabaiana, SE, Brazil
2 Universidade Federal do Rio de Janeiro, Museu Nacional, Departamento de Vertebrados, Quinta da Boa Vista, São Cristóvão, CEP 20940-040, RJ, Brazil
* Corresponding author: E-mail: rony__peterson@hotmail.com

Abstract: The genus *Xenohyla* is currently composed of two species, *X. truncata* (Izecksohn, 1959) and *Xenohyla eugenioi* Caramaschi, 1998. Both species are usually found inside bromeliads; *X. truncata* inhabits the restingas of the state of Rio de Janeiro, southeastern Brazil, and *X. eugenioi* transitional areas between the Atlantic Forest and the Caatinga biomes in northeastern Brazil. We report the first record of *X. eugenioi* in the state of Sergipe, expanding the species geographic distribution by 423.4 km in a straight line in relation to its type locality, in the municipality of Maracás, south-central state of Bahia, Brazil.

Key words: Agreste, Atlantic Forest, Caatinga, rare species, bromeliads

The genus *Xenohyla* was erected by Izecksohn (1998) to accommodate a single species, *X. truncata* (Izecksohn, 1959), distributed along the entire coastal plains of the state of Rio de Janeiro, southeastern Brazil (Carvalho-e-Silva et al. 2004). Later, *X. eugenioi* Caramaschi, 1998 was described based on specimens deposited in the collections of the Museu de Zoologia da Universidade de São Paulo (MZUSP) and of the Museu Nacional, Rio de Janeiro (MNRJ), which came from different municipalities in the state of Bahia, northeastern Brazil: Maracás (type locality), Ipirá (Napoli and Brandão 2004), Planalto Baiano, and Poções (Caramaschi 1998).

Both species are usually found inside bromeliads. *Xenohyla truncata* was recorded in the restingas of Rio de Janeiro (Izecksohn 1971, 1998) and *X. eugenioi* in the transitional area between the Atlantic Forest and the Caatinga biomes in northeastern Brazil, These hylids have a robust body, with a wider than long depressed head, snout short and truncate in dorsal view, short forelimbs, and with a moderately robust forearm (Caramaschi 1998).

At 18:06 h on 11 April 2014, a specimen of *X. eugenioi* (45.7 mm SVL) (Figure 1) was captured after actively searching. It was found inside a terrestrial bromeliad in a patch of riparian forest at the Fazenda Senhor do Bonfim (10°37′16″ S, 037°43′54″ W; 128 m above sea level), in

Figure 1. Live adult of *Xenohyla eugenioi* Caramaschi, 1998 (LABEVA 1073, SVL 45.7 mm) in lateral view (**A**), dorsal view (**B**), and frontal view (**C**) from the municipality of Pedra Mole, state of Sergipe, northeastern Brazil (photos by Rony P.S. Almeida).

the municipality of Pedra Mole, western Sergipe state, northeastern Brazil. This forest patch has a total area of approximately 288 ha, located about 3.6 km west from the urban region of the municipality of Pedra Mole, and 1.2 km from the Vaza Barris River. This new record in the state of Sergipe expands the species' distribution 423.4 km in a straight line north from the type locality, in the municipality of Maracás in south-central state of Bahia, and 277 km from the nearest locality in the municipality of Ipirá in north-central state of Bahia (Napoli and Brandão 2004).

The voucher specimen is housed in the amphibian collection of the Laboratório de Biologia e Ecologia de Vertebrados of the Universidade Federal de Sergipe (LABEVA 1073) and was collected under the license permit #4871-1 granted by the Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio).

This species was recorded only from six localities, four in the state of Bahia, one in the state of Minas Gerais, and one in the state of Sergipe (Figure 2).

There is a lack of information on any biological data on this species, including vocalization, tadpole, and color in life, due to its apparent rarity. For the description of the species, the author used only specimens from museum collections. This new record allowed us to observe the living animal. *Xenohyla eugenioi* has eyes with an intense red coloration (Figure 1A). The dorsal region is predominantly dark brown with a gradient from the head towards the urostyle and the body ends in brown color lighter than head. The specimen also has two continuous white bands in the dorsal edge of the body, that run parallel to each other, starting from the nasal region and going towards the middle of the body, where they turn into uniform punctuations until the end of the body. Each shank has four white punctuations (Figures 1B and 1C). The venter is beige and granular; the gular region is yellow. The palms and soles of the limbs are pinkish brown.

The specimen presents morphological characteristics expected for the species (Caramaschi 1998): *Xenohyla eugenioi* is mainly distinguished from *X. truncata* by having a white longitudinal dorsolateral stripe on each side of the dorsum and blotches of the same color scattered over it. This hylid has body robust; head depressed, larger than long; snout short; canthus rostralis distinct and straight; eye small and lateral, its diameter slightly larger than the upper eyelid width; tympanum distinct, rounded; anterior limbs short; diameter of third finger disc sligthly larger than tympanum diameter; fingers fringed on free parts; webbing formula I 2-2.5 II 1.5-2.5 III 2-2 IV; legs short, robust, sum of thigh and tibia lengths about 80% of

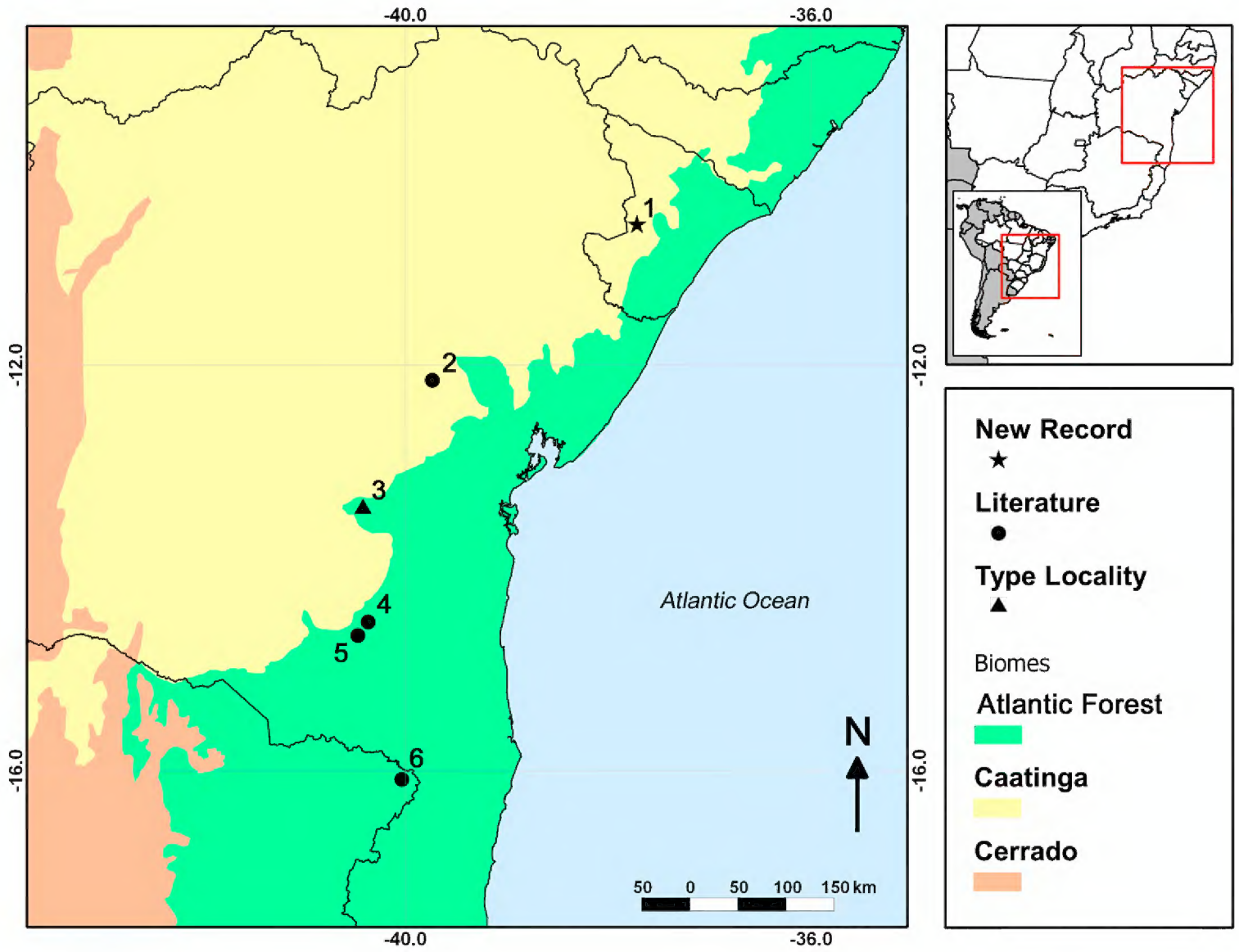

Figure 2. Geographic distribution of *Xenohyla eugenioi*: **1.** Pedra Mole, Fazenda Senhor do Bonfim, 10°37′16″ S, 037°43′54″ W (present study, LABEVA 1073); **2.** Ipirá, 12°09′00″ S, 039°44′00″ W (Napoli and Brandão 2004, UFBA 050); **3.** Maracás, Fazenda Boca do Mato, 13°25′00″ S, 040°25′00″ W (Caramaschi 1998, MNRJ 18794); **4.** Poções, 14°32′00″ S, 040°22′00″ W (Caramaschi 1998, MZUSP 33898); **5.** Planalto Baiano, 14°40′00″ S, 040°28′00″ W (Caramaschi 1998, MZUSP 57090–57092); **6.** Salto da Divisa, Complex Santana (Fazenda Santana, Ondina and Jaboti) 16°05′07″ S, 040°02′03″ W (Feio et al. 2006, vouchers not reported). All Datum not mentioned in original references were treated as WGS84. Laboratório de Biologia e Ecologia de Vertebrados - Anfíbios (LABEVA); Museu de Zoologia da Universidade Federal da Bahia (UFBA); Museu Nacional da Universidade Federal do Rio de Janeiro (MNRJ); Museu de Zoologia da Universidade de São Paulo (MZUSP).

snout-vent length; toe with webbing formula I 1-2 II 1-2 III1.5- 2 IV 2-1 V.

The region where the specimen was collected is a transitional area (ecotone) between the Atlantic Forest and the semi-arid Caatinga. Such environments are very important for the persistence of populations of several species, because they create corridors in the landscape (Metzger 2010; Toledo et al. 2010). This area has been facing high anthropogenic pressure, derived primarily from activities such as agriculture and cattle raising (Metzger 2010; Carvalho and Vilar 2005). The region lacks investment in research and field studies, but its conservation is highly recommended, as harbours a large, biodiversity, including several still undescribed species (Caldas et al. 2011).

ACKNOWLEDGEMENTS

We thank Dr. Ney Pires Ferreira Junior for allowing the use of his ranch during the field work; Igor Rios do Rosário for making the map used in this publication; Marcelo Felgueiras Napoli and Mirco Solé for their suggestions and revision of the paper; ICMBio for the permission for the collection and deposition of the specimen; and UC acknowledges the CNPq for a research grant.

LITERATURE CITED

Caldas, F.L.S., C.B. De-Carvalho, F.F.A. Gomes, E.B. Freitas, R.A. Santos, B.D. Silva, D.O. Santana, and R.G. Faria. 2011. Amphibia, Anura, Hylidae, *Phyllodytes punctatus* Caramaschi and Peixoto, 2004: Distribution extension and first record out of the type locality. Check List 7(1): 55–56. http://www.checklist.org.br/getpdf?NGD140-10

Caramaschi, U. 1998. Description of a second species of the genus *Xenohyla* (Anura: Hylidae). Amphibia-Reptilia 19(3): 377–384.

Carvalho, C.M. and J.C. Vilar. 2005. Levantamento da biota do Parque Nacional Serra de Itabaiana. Biologia Geral e Experimental 300: 9–14. http://www.biologiageralexperimental.bio.br/edicoes/livrobiota/

Carvalho-e-Silva, S.P., A.M. Telles, and C.A.G. Cruz. 2004. *Xenohyla truncata*; in: IUCN, 2014. IUCN Red List of threatened species. Version 2014.1. Accessed at http://www.iucnredlist.org,10 July 2014.

Feio, R.N., L.B. Nascimento, C.A.G. da-Cruz, P.L. Ferreira and D.L. Pantoja. 2006. Anfíbios das Áreas Prioritárias dos Rios Jequitinhonha e Mucuri: pp. 94–119, in: L.P.S. Pinto and L.C. Bede (eds.). Biodiversidade e Conservação nos Vales dos Rios Jequitinhonha e Mucuri. Brasília: Ministério do Meio Ambiente, Série Biodiversidade. 244 pp.

Izecksohn, E. 1959. Uma nova espécie de «Hylidae» da Baixada Fluminense, Estado do Rio de Janeiro, Brasil (Amphibia, Anura). Revista Brasileira de Biologia 19(3): 259–263.

Izecksohn, E. 1971. Sobre a distribuição de alguns anfíbios anuros descritos da Baixada Fluminense, Estado do Rio de Janeiro, Brasil. Arquivos da Universidade Federal Rural do Rio de Janeiro 1: 5–7.

Izecksohn, E. "1996" [1998]. Novo gênero de Hylidae brasileiro (Amphibia, Anura). Revista da Universidade Rural, Série Ciência e Vida 18: 47–52.

Metzger, J.P. 2010. O Código Florestal tem base científica? Natureza & Conservação 8(1): 92–99. doi: 10.4322/natcon.00801017

Napoli, M.F. and F. Brandão. 2004. Geographic distribution: *Xenohyla eugenioi*. Herpetological Review 35(3): 284.

Toledo, L.F., S.P. Carvalho-e-Silva, C. Sánchez, M.A. Almeida, and C.F.B. Haddad. 2010. A revisão do Código Florestal Brasileiro: impactos negativos para a conservação dos anfíbios. Biota Neotropica 10(4): 35–38. http://www.biotaneotropica.org.br/v10n4/pt/abstract?article+bn00410042010

Authors' contribution statement: RPSA and HA collected the data and wrote the text; UC identified the frog and wrote the text; and EJRD wrote the text.

Received: 9 April 2015
Accepted: 2 August 2015
Academic editor: Rodrigo Lingnau